BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting
DATE OF CONFERENCE: December 16, 2020
LOCATION OF CONFERENCE: Virtual meeting held via Zoom

ATTENDED BY:

NHDOT
Sarah Large
Matt Urban
Andrew O'Sullivan
Ron Crickard
Mark Hemmerlein
Arin Mills
Samantha Fifield
Nancy Spaulding
Jon Evans
Chris Carucci
Meli Dube
Kirk Mudgett
Julius Nemeth
Bill Saffian
David Scott
Don Lyford
Joe Adams
Jennifer Reczek
Marc Laurin
Ron Kleiner
Tobey Reynolds
Mike Mozer
Bob Juliano

ACOE
Richard Kristoff
Mike Walsh

Federal Highway
Jaimie Sikora

EPA
Beth Alafat
Jeanie Brochi

NHDES
Lori Sommer
Karl Benedict
Eben Lewis
Stefanie Giallongo
Christian Williams
Ann Pelonzi

NH Fish & Game
Carol Henderson

NHB
Amy Lamb

The Nature Conservancy
Pete Steckler

US Coast Guard
Jeff Stieb
Donna Fischer

NOAA
Michael Johnson
Roosevelt Mesa

USFWS
Susi von Oettingen

Consultants/ Public Participants
Rich Brereton
Kevin Ryan
Bill McCloy
Sean Sweeney
Bryson Welch
Lee Carbonneau
Ray Hanf
Dave Smith
Josif Bicja
Ed Weingartner
Stephanie Dyer-Carroll
Dan Hageman
John Stockton
Roch Larochelle
Nicholas Caron
Alyson Eberhardt, UNH
Thom Marshall

PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH: *(minutes on subsequent pages)*

(When viewing these minutes online, click on a project to zoom to the minutes for that project.)

NOTES ON CONFERENCE:

Finalize Meeting Minutes
Finalized and approved the November 18, 2020 meeting minutes.

New Hampton, 2020-M309-1
Arin Mills, NHDOT Environmental Manager, opened the presentation of the project by stating that the objective is to review conceptual alternative design concepts and gather feedback from the agencies. NHDOT anticipates presenting the project at a future meeting, expected winter 2021, to discuss the preferred alternative and ahead of a wetland permit application. The state funded project is located on the Ashland/New Hampton town line, and adjacent to Winona Rd (state maintained) and Ames Brook. Ames Brook drains Sky Pond approx. 2.75 miles upstream and Jackson Pond approximately 2 miles upstream of the project location. From the site, Ames Brook further travels 0.75 miles downstream to Ashland Center where it joins Squam River, and further travels 1.5 mils to the Pemigewasset River.

The Tier 3 stream has a watershed area of 2,804 acres and Ames Brook is a 2nd Order stream. An initial environmental review found Ames Brook is a predicted warmwater stream, not within a ¼ mile Designated River, no NHB species known, no cultural concerns (will need final design review) and is < 1 acre of disturbance and no Priority Resource Areas (PRA) in or adjacent. Arin state this is a preliminary review and a final review will be completed for the final design, as needed. Photos were then shown of the project location taken during the 2020 field season. Bank erosion had been described as ongoing for several years, with a most recent failure in the spring of 2020 with a large Pine falling into the stream, leading to further destabilization of the slope and safety concerns. DOT crews removed the Pine in spring of 2020 and have been in communication with adjacent landowners.

Samantha (Sam) Fifield, P.E. NHDOT District 3 Highway Maintenance, described the alternatives considered. They are: no action, concrete retaining wall, Gabion wall and Terraced type reinforced slope. Sam stated that the no action alternative is not a viable option as the ongoing slope failure is a safety concerns and repair is needed to maintain a safe and passable roadway. Sam showed a drawing depicting the delineated wetland resources overlayed with a design concept and existing/proposed contours. Sam also further described that the location has had 3-4 failures over time, likely due to the sandy steep soils overlayed with heavy trees; as a tree falls off the steep slope, the tree's root system takes down the surface vegetation exposing the sandy soils.

Sam first presented the concrete retaining wall preliminary design. The concrete wall would likely be cast in place and backfilled with stone which can be covered with hummus and vegetated, a similar treatment was used on the Walpole 14747 project to vegetate stoned slopes. Next, the Gabion wall was presented, which is similar to the concrete design, although Gabion type baskets would be filled with stone onsite and anchored into the slope. This option also could be backfilled and vegetated, similar to the concrete wall design. Lastly, the terrace type reinforced wall (Geoweb®) was presented and was noted that this design has not yet been used by NHDOT in practice. This was described as material filled cells, similar but much smaller in size than the Gabion type baskets. This option too can be vegetated above, while also allowing for vegetation along the face of the slope.

Sam provided a comparison of the features of each design alternative, with the concrete retaining wall being the costliest. The lifespan of alternatives are similar, as well as drainage required to allow water to discharge the backfilled slope. Construction time is anticipated to be shortest for the terrace type slope, as the smaller cells could be filled onsite and stacked. Construction is anticipated in the fall and winter months, with final slope revegetation in the spring, and expected to take 3-4 months to complete.

Arin then discussed access considerations for the site, with the preferred to access from the Ames Brook Campground land, located adjacent to the failure of the opposite side of Ames Brook. DOT has been in communication with the campground owner, who is supportive of the access concept from his land. It was described that construction equipment would use existing campground gravel roads, as well as existing cleared wooded trails, to access a staging area. The proposed staging area, currently forested, would minimize additional ground disturbance needed for site access and make use of a proposed future tent campsite anticipated by the campground owner. Arin mentioned that the area had been evaluated for wetlands and that no wetland impacts are anticipated on the Ames Brook Campground property. Photos were shown of the existing conditions that were taken in the fall of 2020. A plan was also shown depicting the existing roads/trails onsite, as well as the proposed staging location. Access to the construction site from the staging site was described as the placement of temporary concrete type abutments and steel plate spanning the Brook, allowing all equipment and wall material to be accessed without stream impacts or the placement of a water diversion within the Brook. Alternative access was also considered from Winona Rd, although a road closure and detours, as well as potential impacts to a forested wetland located adjacent to the Brook, were some concerns for that alternative access.

Karl Benedict, NHDES, asked that the root cause of the failure (stormwater, seepage, draining, etc) be determined and addressed in the proposed design. Sam stated the geotechnical engineer that reviewed the project stated the failure was likely caused by the sandy soils and tree weight, and roadway runoff was not determined to be a contributing factor in the ongoing failure. Karl also asked a 'bench' above the Ordinary High Water (OHW) be considered to allow for stream overflow and wildlife passage, as well as bioengineering alternatives be considered. Karl also expressed concern for the possible Alteration of Terrain (AoT) requirements for the campground expansion, and to be sure that is considered in the overall construction plan for the area.

Lori Sommers, NHDES, asked if movement of the roadway away from the slope was considered in the alternatives. Sam explained historically the roadway shoulder was estimated to be 10-15' from the roadway, and it is anticipated the bank will continue to erode over time. Sam also mentioned the location of a possible historic home opposite the project area which would likely be impacted with this design. Lori also asked that potential bioengineering designs be considered, such as Flex MSE wall system. Sam state the Department has a policy to not install MSE walls adjacent to running water. Lori state mitigation per linear foot of channel and bank would likely be required, and Sam said it is estimated about 230' of wall would be required. Sam also mentioned a project in Walpole where the project was considered self-mitigating, and Lori asked to see pictures of the site to show that vegetation had been established and for reference when determining mitigation for this project.

Carol Henderson, NHF&G, commented that a vegetated slope with a wildlife shelf would also be preferred for protection of the stream and wildlife passage. Carol mentioned coldwater fish species were also documented nearby, Arin acknowledged and said she will review further as the project progressed. Amy Lamb, NH Natural Heritage Bureau (NHB) also preferred a vegetated slope option and recommended use of native plant species. She also commented on the use of plastic materials in the design, and preferred use of more natural materials, if practicable.

Rick Kristoff, US Army Corp of Engineers, commented that an Individual Army Corp of Engineers Wetlands permit would be required if the project proposes to impact greater than 500 linear feet along the Brook. Beth Alafat, US Environmental Protection Agency (EPA), also asked the root cause of the failure be identified and addressed and also recommended to keep the wall away from the stream as much as possible. Pete Steckler, The Nature Conservancy (TNC) recommended a fluvial geomorphologist evaluate the unintentional downstream impacts from the design plan, and also recommended a riparian corridor for

wildlife be considered. Pete also mentioned the possible consideration of upgrades to the bridge stream crossing downstream as possible mitigation for this project.

Sam made a final mention that the project may move to the NHDOT Project Development team from District 3, with the possibility of a consultant becoming involved in the design. She thanked them for their comments and will consider as final plans are developed.

This project has not been previously discussed at the Monthly Natural Resource Agency Coordination Meeting.

Rye, #42714

Rich introduced the project on behalf of FBE and Ralph Sanders of NHDOT District 6 (not in attendance). FBE has been an on-call wetland contractor for NHDOT since 2013, but this was FBE's first NHDES Standard Dredge and Fill application development for NHDOT.

Rich presented the project which lies along Route 1A/Ocean Blvd in Rye. Three work areas are included in the project: one abandoned driveway and one currently used driveway serving 2125 Ocean Blvd; and one culvert under Route 1A previously replaced in 2018 under a NHDES Emergency Authorization when the culvert was failing, which was done by NHDOT in cooperation with Eben Lewis of NHDES. The proposed work includes replacing and modifying one driveway culvert, removing one driveway culvert, and retroactively replacing the Route 1A culvert in 2018. NHDOT's Standard Dredge and Fill Wetlands permit application will include this work, and serves as the Department's follow up to the 2018 Emergency Authorization for the culvert replacement work under Route 1A.

The full extent of the highway Right of Way is being sorted out with FBE's partner HEB working on the question. It is either in the ROW or within an easement granted to NHDOT at the time of construction of this section of highway. This stretch of Route 1A was constructed in the 1950s and involved extensive fill and dredging/excavation of drainage ditches. The road bisects a larger wetland complex.

The overall problem with the driveways is perched culverts and standing, impounded water. This situation impedes tidal flow and is an impediment to aquatic organism passage. The new driveway has twin 24" culverts that are likely in poor condition and need to be assessed. The stone header also needs to be reset. Water and sewer concerns regarding the old driveway have been sorted out. There is no sewer connection buried in the old driveway and the water connection is not in use, making no issue with removal. The proposed work is to completely remove the old driveway and its twin 21" culverts, which will alleviate the standing water problem. The third work area is the 2018 culvert replacement. A single 36" CMP culvert was failing, and was replaced with twin 36" HDPE culverts.

Rich then summarized the natural resources present. He showed the wetland delineation map, showing that the wetlands were delineated as one continuous wetland complex with four sub-areas and one stream channel. Additional tidal survey data was collected in Sep-Oct 2020 by HEB Engineers. Wetland area A1, a palustrine emergent marsh, does not receive salt water during mean high water, but does during plus tides. Wetland area A2, categorized as an excavated estuarine intertidal streambed with mud bottom, is a manmade drainage ditch and has been maintained as such. Wetland area A3 is an estuarine intertidal emergent marsh, as is wetland area A4. A3 and A4 are connected via the Route 1A culvert.

Rich summarized the details of the Chapter 600 coastal resource work. The project is proposed for a 25-year design life with a high tolerance for flooding risk based on the type of asset (culverts) and the area's

known frequency of flooding during coastal storms. In the appropriate sea level rise scenario, the Relative SLR is 1.15 feet and the RSLR-adjusted Design Flood Elevation is 10 feet.

Rich summarized the Water Quality context of the project site, which is ~0.75 miles upstream of Rye Harbor, a waterbody listed as impaired for mercury, PCBs, and dioxin. This project is not anticipated to have any impacts on water quality in Rye Harbor. Rich showed a map of nearby conserved lands showing no conservation land within or adjacent to the project area. Next, Rich showed a map of wildlife habitat and rare species. Wetland areas A3 and A4, as salt marsh, are classified as highest ranked habitat. The USFWS IPAC review showed the presence of northern long-eared bat and red knot. No tree removal is proposed, meaning there is no potential impact to northern long-eared bat. Red knot is a shorebird that prefers sandy shore habitats, and as such is not anticipated to be impacted by the proposed impacts to the intertidal marshes with mud substrates involved in this project.

Sarah Large then asked the Resource Agency members for their questions and comments in a roll call format.

Karl Benedict of NHDES said that, on the basis of the Emergency Authorization and the previous consultation with Eben Lewis, he would defer to Eben on this project.

Eben Lewis asked if Rich could speak to how the project would approach stabilization of the drainage ditch during and after construction activities around the two driveways. Rich replied that FBE, HEB, District 6, and BOE are still planning the proposed construction sequence and identifying appropriate erosion control measures, but that Ralph Sanders of District 6 anticipates that the project will only require excavation of the driveways and in the immediate vicinity as needed for culvert replacement/removal. No excavation is proposed along the ditch itself. The work is to be completed during low tide and not while inundated. Eben reminded Rich to make sure to include dewatering notes. Rich replied that Ralph is planning to supply dewatering information, though he hopes timing work at low tide will minimize the need to dewater. Kevin Lucey of NHDES said the work so far is thorough. DES actually missed this culvert during a recent culvert assessment initiative covering the area. Kevin raised the potential for the marsh southwest of the project to serve as a salt marsh migration location. He also noted that NHDES was aware of complaints of nuisance flooding from nearby residents, and suggested that this project might help ease flooding as well. Kevin asked for confirmation that the culverts were an in-kind replacement. Rich replied that yes, the plan was to install the same diameter (24”) twin culverts under the new driveway. The twin 21” culverts under the old driveway are to be removed. Lastly, Kevin noted that it’s an interesting watershed for many reasons. When Jenness Beach surges, the marsh area east of the project receives tidewater from the east, thus flooding concerns exist both east and west of site.

Chris Williams of NHDES echoed the comments of Eben and Kevin about the thorough presentation and asked whether we anticipate the project will be covered under the Army Corps General Permit. Rick Kristoff of the Corps responded to say that any new construction will not be covered under the GP and would be an Individual Permit. Rick advised the project team to check with DES as to whether the existing driveway already has a Corps permit. If not, the property owner may need to acquire one. Rick and Andy agreed to follow up after the meeting, and Eben agreed to look up the relevant DES permits for the new driveway. Chris Williams of NHDES added that any new Corps permit will need review from the DES Coastal Program.

Lori Sommer of NHDES said that her office will look to Andy and Eben for an update on what they find in terms of a new driveway permit. If a permit is needed now, it would require mitigation. Lori agreed with the project team that the old driveway removal will improve hydrologic conveyance and allow better tidal

movement. She added a reminder to take all precaution to avoid introducing invasive species during the lifetime of the project.

Carol Henderson of NH Fish & Game commented that she appreciates the effort and encourages the proposal to remove the driveway and to remove the perched culvert and alleviate perching in the remaining culvert, and agrees that it will increase aquatic passage.

Amy Lamb of NHB commented that during NHB review it was not clear that culvert under 1A was going to be replaced. There is a record of salt marsh agalinis (Agalinis maritima) in the salt marsh area north and east of the project. Amy suggested that a new letter could be reissued to ensure that the plant is kept in mind during permitting and construction. Rich agreed to revisit the NHB letter and coordinate any needed changes. Matt Urban commented that DOT is not proposing to replace the pipes under Rt 1A, only to retain the impacts already incurred under the Emergency Authorization in 2018.

Rick Kristoff said that his previous comments were sufficient and that he would follow up with Andy. Mark Hemmerlein of DOT asked for clarification from Rick on whether he thought this project would be a Corps Individual Permit? Rick replied that the answer would be yes if it's new construction. Mark asked Rick if the Corps has already reviewed the new Section 401 rules, and if so, is there any effect on this project. Rick said that, in short, the Corps is working on it with EPA and he'd be glad to catch up Mark at a later date.

Beth Alafat of EPA commented that Jeanie Brocchi will be the EPA lead for this project but couldn't make it to the meeting. Beth asked on behalf of Jeanie and herself about the project's designated design life. Is 25 years typical for this type of project, and is that long enough? Beth suggested that the project team coordinate with Jeanie about the design life question, and Rich agreed.

Peter Steckler of TNC asked whether there are any stream channels draining from the wetland south and west of the project toward the drainage ditch and the driveways. And are the other culverts sized appropriately? Rich replied that the wetland delineation did not find a stream channel connecting the marsh area south and west of the project area and the drainage ditch, but that the drainage ditch itself was classified as an estuarine intertidal streambed and certainly received tidal flow in plus-tide conditions. As for the culvert sizing, Rich replied that the twin 36" culverts under Rt 1A reflected the hydraulic analysis done at the time of the Emergency Authorization in 2018, and that Rich and DOT Bureau of Environment would confer with Eben about the twin 24" culverts under the new drive.

This project has not been previously discussed at the Monthly Natural Resource Agency Coordination Meeting.

Thornton, #40613

Today's NRACM meeting was a virtual meeting over Zoom. Bryson Welch (Thornton Tomasetti), Bill McCloy (Normandeau) and Sean Sweeny (Headwaters) were present. Bryson introduced the project team and summarized the existing bridge including its general location, surrounding landmarks and reviewed some photos of the site. Bryson then summarized the details of the existing bridge, its deficiencies, and the project's purpose and need. The purpose of the project is to rehabilitate the structurally deficient bridge deck thereby removing it from the State Bridge Red List and optimizing its remaining service life and to provide scour countermeasures, as required, to resolve scour concerns. The preferred alternative will remove and replace existing bridge railings, sidewalk, curbs, concrete deck, and expansion joints, repair deteriorated abutment concrete, update deficient roadway and drainage items and install scour countermeasures focused on the two round column piers located in the river channel. Bridge replacement

not preferred alternative. The two leading alternatives for maintenance of traffic were also discussed, including phased construction with half of the bridge being worked on at one time while traffic utilizes the other half and an onsite detour using a temporary bridge from NH Route 49 to Andy's Drive/Chickenboro Rd. Advantages and disadvantages to each were briefly touched upon. Advantages of the phased construction approach include less ROW impacts; while disadvantages include longer impacts to Route 49 traffic and the need for placing temporary bridge supports in the channel. The onsite detour alternative would shorten the impacts to Route 49 traffic because it would allow for the entire bridge to be worked on at the same time and would remove the requirement for the temporary supports; disadvantages include coordinating the use of the local side roads and installing a temporary bridge. The final decision will be made later in the development of the project.

Bill McCloy (Normandeau) summarized known natural resources and other related findings about the project site based on initial desktop due diligence and field investigations. Coordination with NHB indicated no known species or natural communities of concern in the bridge vicinity. Scattered invasive species were noted during the wetland delineation. Coordination with USFWS IPaC indicated that the project falls within the range of the northern long-eared bat (NLEB). A visual inspection of the bridge structure in June 2020 did not reveal any signs of bat utilization or roosting per the USFWS guidance and methodology. The Mad River is not considered Essential Fish Habitat (EFH) when under USACE jurisdiction/or when they are the lead federal agency; however additional coordination may be required if the project gets federal funding in the future. Coordination with NHF&G indicated several known species of fish in the project area and a request to avoid in-water work from October through March to protect wild brook trout.

A wetland delineation was completed in June 2020 and four palustrine wetlands were delineated and documented within the project area; along with one small intermittent tributary that is mostly piped within the project area. A mapped FEMA floodplain is also present within the project area, and Normandeau has coordinated with the Floodplain Management Program. They hydraulics of the crossing are not anticipated to be altered. The Mad River is a 4th Order waterway with a contributing watershed of 48.96 square miles (31,334.4 acres) which places the crossing squarely within Tier 3 criteria.

The proposed permitting approach was discussed last, including completion of the NHDOT Environmental Review Short Form for State Funded Projects (unless funding changes in which case a NEPA process would need to be followed), a NHDES Standard Wetland Permit for the Tier 3 crossing, the potential for a NHDES Alteration of Terrain (AoT) permit, and a likely Shoreland permit.

The following questions and comments were made by participants in the meeting:

Karl Benedict (NHDES):

- Confirmed that the proposed/expected permitting approach would fall under the Tier 3 Repair rules/guidance and referenced 904.09 certifications
- Mentioned pebble count, geomorphic and stream sim information
- Mentioned the potential temporary bridge
    - There are not many specifications for temporary bridges, but they are limited to 2 years in duration
    - A restoration plan will be required to put the site back to its native condition

Lori Sommer (NHDES):

- Concurred with Karl regarding the proposed permitting approach

- She will be interested in the duration of temporary impacts and will keep an eye on this when we circle back around once we have a better sense for the scale, nature and duration of proposed impacts to Mad River and wetlands

Rick Kirstoff (USACE):

- Recommended we circle back with USACE, NHDES, Lori when impacts are more in focus and we can discuss need for mitigation and possible approaches if required

Carol Henderson (NHF&G):

- Carol did not have any specific questions

Amy Lamb (NHNHB):

- Amy did not have any specific questions

Beth Alafat (US EPA):

- She will be interested in the type of high-performance waterproofing that will be used on the project; I'm assuming they will be looking for what is applied to the bridge deck.

Peter Steckler (TNC):

- Peter had no comments

Mike Mozer & Joe Adams (NHDOT):

- Mike and Joe did not have any specific questions at this time

USCG:

- Not present but Rebecca or Sarah can assist in how to provide the required notices

This project has not been previously discussed at the Monthly Natural Resource Agency Coordination Meeting.

Dover-Rochester, #29440

Sarah Large introduced the project, listed agency participants, and invited the speakers to control the screen for the slide show presentation.

Ray Hanf of HNTB provided an overview of the project scope, project purpose, and project requirements. The scope includes the installation of all electronic tolling infrastructure to replace existing toll facilities on the Spaulding Turnpike in Dover and Rochester in desperate need of repair; construction of median concrete barrier, construction of water quality features and drainage systems, rehabilitation of pavement and construction of wood panel soundwalls. The purpose of the project is to reduce energy use and vehicle emissions, improve safety and mobility, replace deteriorated toll infrastructure and automate collection operations. Project requirements include mitigation of noise impacts, mitigation of wetland, stream and vernal pool impacts, and treatment of stormwater from project sites. Aerial photos showing project locations in both Cities were shown.

Lee Carbonneau provided an update of agency coordination status. The NH Division of Historical Resources requested inventory forms for the existing toll facilities in both locations, and this is being completed by NH Department of Transportation (NHDOT). There are no conservation lands in the project area. The only threatened or endangered species identified in the project area is the Northern Long-eared bat (NLEB). The IPAC on-line consultation with US Fish and Wildlife Service (USFWS) was completed

for NLEB for clearing of about 9 acres of forest in Rochester, and the 4D rule will apply to this project. There is no tree clearing in Dover. The City of Rochester has not responded to multiple outreach efforts requesting local mitigation ideas and other project input.

There are no impacts to jurisdictional wetlands, vernal pools or streams in Dover, but there will be approximately 35,000 square feet of work in the Protected Shoreland of the Bellamy River. A Permit by Notification is anticipated. Direct permanent impacts for sound wall construction in Rochester include approximately 32,298 square feet of permanent fill in nine wetlands, loss of one medium value vernal pool and impacts to four Tier 1 intermittent streams with a combined channel length of 369 linear feet. The wetland impacts are approximately 3,000 square feet less than the conceptual design impacts. There will also be a little over 7,000 square feet of temporary impacts at the toe of fill slopes for erosion and sedimentation controls and construction access.

The Cocheco River, a Designated River, is west of the Turnpike and will not be impacted, but one tributary stream and three impacted wetlands east of the Turnpike are within 1/4 mile of the River, so the draft wetlands application will be provided to the Local River Advisory Committee for review.

Ray Hanf provided details on the southern and northern soundwalls in Rochester. The southern soundwall is 3,750 feet long with height range of 10 to 14 feet. There are 121 total benefited dwellings, and 91 of these will have benefits of at least 7 dB. The northern soundwall is 2,400 feet long with height range of 10 to 17 feet. Total benefited dwellings for this wall is 108, with 84 of these benefitted by at least 7 dB. Ray described the typical soundwall section, including embankments, slope limits, soundwall and piers. He then went through the various soundwall design alternatives that were evaluated to balance the impact and mitigation of noise with the impacts and mitigation of wetland resources. Two alternatives for the south soundwall were evaluated through modeling. Alternative 1S reduced the soundwall berm by 200 linear feet and reduced wetland impacts by 2,080 square feet, with no loss of benefited noise receptors. This Alternative was selected. Alternative 2S reduced the soundwall and berm by 778 linear feet, with 22,140 square feet of wetland impact reduction. However, there were 33 lost benefited receptors with this alternative, which was considered unacceptable. Two northern soundwall alternatives were also considered. Alternative 1NS reduced the southern end of the soundwall berm by 166 feet in length, eliminating 326 linear feet of stream impacts and 2,059 square feet of wetland impacts. But five benefited receptors were lost. Alternative 1NN would reduce the northern end of the soundwall and berm by 297 feet, reduce wetland impacts by 8,516 square feet and eliminate 7,438 square feet of vernal pool impacts. However, there were also 31 lost benefited receptors. Neither alternative for the northern soundwall was selected due to substantial losses in noise mitigation benefits.

Culverts will be required on four of the eight streams delineated in Rochester due to soundwall construction. Streams flow east to west under the Turnpike toward the Cocheco River. Three Tier 1, intermittent streams will require culvert extensions, and one will require installation of a new culvert to allow for its conveyance under the soundwall. If one or more of these culverts cannot pass the 50-year storm, an Alternative Design Report will be submitted. Ray provided plan sheet excerpts for each stream crossing. One 30-inch and three 18-inch culverts are proposed. Ray also provided a plan showing temporary and permanent soundwall impacts to vernal pool RVP01. Lee described three photos of the vernal pool.

Ray quickly described the water quality features associated with both portions of the project, providing slides showing the locations of the proposed wet pond and gravel wetland treatment locations in Dover, and the proposed wet extended detention basin in Rochester. Additional treatment swales, six (6) in Dover and two (2) in Rochester, are also designed. Lee summarized the mitigation approach, which includes soundwalls for mitigating the identified noise impacts, and, as no local mitigation ideas were received from

Rochester, an Aquatic Resource Mitigation (ARM) fund payment for wetland, stream and vernal pool impacts. Temporary Impacts to wetlands will be restored with a wetland seed mix of native species. The current ARM fund estimate is just under $450,000, although secondary impacts are still being discussed with the US Army Corps of Engineers (USACE) and the NHDOT.

Ray provided the anticipated construction cost estimate of $18.75 million, which includes $5.5 million for soundwalls. The proposed advertisement date for construction bids is May 2021, and construction is expected from late summer 2021 through late spring 2023.

Sarah began the roll call request for comments/questions:
Karl Benedict wanted to know if every opportunity to avoid and minimize impacts to the vernal pool was investigated, including other types of soundwalls or other possible soundwall configurations. He noted that the Alteration of Terrain rules need to be met for water quality treatment. Karl also suggested that if there is forested wetland conversion, this should be identified and discussed with the USACE.

Stephanie Giallongo noted that the Bellamy River's Protected Shoreland in Dover should be measured from the highest observable tideline, and it looks like the edge of water might have been used as the reference line instead. If so, the Protected Shoreland could shift. She also noted that if the project impacts floodplain wetlands along the Cocheco River, these would need to be identified as Priority Resource Areas. She agreed with Karl that vernal pool impact avoidance and minimization should be thoroughly demonstrated.
Lori Sommer mentioned that the presentation was very thorough, and asked if other vernal pools were identified in the project area. Lee responded that field investigations were confined to the Turnpike right-of-way and no other vernal pools were observed in Rochester. One vernal pool was identified north of the project area in Dover, but will not be affected by the project. Lori inquired as to the inclusion of the pipe extensions in the impacted stream length, Lee confirmed that all impacted lengths of the streams have been included. Lori said that an ARM fund payment will be reasonable mitigation for the project.

Carol Henderson said that the Alteration of Terrain project rules requiring wildlife surveys will apply to this project. She also asked about wildlife connectivity and movement across the Turnpike, and the possibility of having gaps in the soundwalls and median concrete barriers. Lee noted that this was discussed with NHDOT, and the height of the median is the minimum to meet AASHTO standards, and these standards do not allow for gaps in the median barrier. There is a gap between the north and south soundwalls, however. Ray added that south of the toll plaza, a guardrail is the median barrier, not a concrete wall.

Amy Lamb noted that there are no Natural Heritage database records, and had no comments.

Rick Kristoff stated he had no comments at this time.

Beth Alafat suggested that the soundwall impact analysis be put in a table. She also agreed with Karl that alternative soundwall designs should be investigated. The vernal pool will not be viable after construction, and the temporary vernal pool impacts should be considered permanent.

Pete Steckler was glad to know there is a gap between the north and south soundwalls. He asked if it was feasible to construct the portion of the soundwall in the vernal pool on posts over the water to minimize impacts. Only the posts would directly impact the pool, and animals could move freely in the water.
Jon Evans stated that the project team has spent a lot of time looking at sound barrier options that are reasonable and still meet the required noise barrier criteria. Mitigation costs were considered in these analyses. Very poor soils along the length of the northern soundwall, including where the vernal pool is

located will require a solid earth berm to support the wall, and therefore posts will not suffice. He also noted that elevating the wall on posts to limit impacts to the vernal pool would not be an option as this would leave a gap at the bottom of the wall which would negate any of the noise reduction benefits from that section of the wall. Similarly, any linear breaks in the wall would also let noise through, defeating the noise mitigation value of the wall. Jon noted that there really are no other alternatives to avoiding or minimizing the wetland impacts associated with these walls other than shortening the ends of the walls as was noted during the presentation.

Andy O'Sullivan asked Karl if the impacted streams could be included in a single alternative stream crossing report, and Karl responded that as long as the linear and areal impacts are included, and each stream is described separately and is individually identifiable, they can be included in one report.

This project was previously discussed at the 8/19/2020 Monthly Natural Resource Agency Coordination Meeting.

Meredith, #42912 (X-A004(991))

Chris Carucci, NHDOT Bureau of Highway Design, introduced the project and provided a description of the project location, existing conditions, project purpose and need and proposed alternatives. The purpose of the meeting was to review the project area and existing resources and to receive feedback on the proposed alternatives and potential impacts. The project is federally funded and is slated to advertise in August 2021 with anticipated construction in 2022. The purpose of the project is to address structural deficiencies at an existing 178' x 90" structural metal plate culvert carrying an unnamed stream under NH Route 104 just south of the intersection of Corliss Hill Road and Hatch Corner Road in the Town of Meredith. The crossing is a Tier 3 crossing with a 1.72 square mile drainage area. The culvert currently has a concrete headwall at the inlet and is mitered at the outlet with concrete support walls with a maximum of 18' of cover at the centerline of NH Route 104. The need for this project is demonstrated by the deterioration of the existing pipe which is demonstrated by voids along the invert and lower sides, as well as several detached or missing sections of invert. The pipe has separated from the headwall and has significant change in shape in some places. There are also large sinkholes in the roadway embankment near the inlet and outlet. This culvert is currently statewide priority #2 based on fill height, traffic volume and is at high risk of further deformation and structural failure. The Department aims to avoid this, as NH Route 104 is a high volume road and is one of the three major regional routes connecting Interstate 93 to the Lakes Region and western White Mountains. Structural failure of the culvert would have significant impacts on the traveling public, local commerce and tourism.

The current crossing has a 2.98% slope, does not have a history of flooding and is capable of passing the 100-year flow. The stream is not perched and is in generally god condition with no significant bank erosion or sediment deposition. There is a small waterfall just upstream formed by a bedrock outcrop and the next culvert upstream, which is town owned, has a substantial perch. There is a large ponded wetland farther upstream which feeds the unnamed stream. The unnamed stream is a tributary to Lake Winnisquam which is located 1.85 miles downstream of the project with only one other crossing, a state-owned bridge, in between. There is also a small forested wetland adjacent to the culvert inlet and an intermittent stream on the east side of the outlet header which carries water from a State owned 24" culvert crossing underneath Corliss Hill Road.

A stream assessment was completed in May of 2020. The stream is a Rosgen Type B with highly variable bankfull widths averaging 20.75' near the 90" culvert. A bankfull with of 12.8' was determined for the reference reach which was located upstream of the waterfall and the perched culvert crossing under Hatch Corner Road described above. An entrenchment ratio of 1.4 was used to set a compliant span of 18'. The

existing culvert passes the design Q100 of 270 cfs with a headwater depth of 6.13 feet with outlet velocities ranging from 7.4 ft/s for Q2 to 11.3 ft/s for Q100.

The project is located in a FEMA flood zone A at the outlet. It is also located within the ranges of the federally threatened northern long-eared bat and small whorled pogonia. Appropriate consultation with the US Fish and Wildlife Service will be completed. The NH Natural Heritage Bureau did not indicate records of any known protected species in the project area. The culvert is eligible for review under the Section 106 Programmatic Agreement, and there are no anticipated adverse effects to water quality.

C. Carucci explained the various alternatives that were considered. First, a fully compliant crossing involving an 18" span bridge with an estimated $3.6 million cost and a funding/design delay of 3-5 years. This would require open cut phased construction of a new off-alignment crossing in order to maintain traffic during construction and stream flow through the existing culvert. This would result in temporary widening on both sides of NH Route 104 and significantly increased earth disturbance, clearing, grubbing and stream/wetland impacts. For these reasons, this alternative was not fully developed and is not preferred by the Department. A hydraulic design involving a 6' high x 8' wide box culvert with 2' of simulated stream bed material which would pass the 50 year storm without submerging the inlet was also considered. This alternative would cost an estimated $1.9 million and would have similar delays in construction and impacts. Replacement in-kind with an estimated cost of $1.2 million was also considered but due to the complications associated with open-cut construction would have similar timing delays and impacts as the other replacement options. For these reasons, none of the replacement options were examined further and are not preferred by the Department as the current culvert is at high risk for failure and delays in repairs increase the subsequent safety risk to the traveling public.

Several rehabilitation options were considered, including using cured-in-place liners, spray on liners and shotcrete invert repair, however, none of these approaches were considered feasible due to the advanced level of deterioration of the pipe which has significant change in shape and section loss. Sliplining is considered to be the only remaining feasible option which would meet the project purpose and need within a timeframe that is acceptable to avoid increased safety risk to the traveling public. Sliplining with a HDPE pipe was not considered viable because it must be sized to fit the existing smallest dimension of the host pipe, which would decrease the diameter of the pipe to 66" due to the deterioration and existing shape change. The preferred alternative is to slipline with a 76" diameter metal tunnel liner which involves constructing the liner in short rings and allows workers to safely remain within rehabilitated sections while reaching forward to remove obstructing portions of the existing pipe. This alternative is estimated to cost $417,000 and would take 3 months and could be ready for construction in 2022. It would also have significantly fewer impacts to wetlands and streams, less earth disturbance and minimal impacts to traffic during construction. The proposed 76" tunnel liner option would not have a significant effect on pipe capacity, velocity, flooding or sediment transport and there would be no anticipated effect on FEMA maps or downstream structures.

Construction of temporary access roads would be required at the inlet and outlet, which would be located along the toe the NH104 embankments which will require impacting isolated wetlands and an intermittent stream. A 20' x 65' temporary construction easement outside of existing State ROW at the inlet, all other work would remain within the ROW. The ground can be covered with temporary geotextile and stone to minimize disturbance to the wetland soils and root systems. An estimated 7,000 SF (0.16 acres) of clearing is necessary for construction of the access roads (5,995 SF at the inlet and 1,065 SF at the outlet), however, the majority of these trees are between 3" and 8" DBH and removal of stumps and root mat is not anticipated. The total proposed earth disturbance would be 16,800 SF (0.39 acres) and would therefore not require coverage under the EPA's NDPES CGP. Water diversion during construction will be through the existing pipe. All wetland and stream impacts will be temporary. Temporary access roads will impact the

two small isolated forested and emergent wetlands, totaling approximately 950 SF, and 657 SF of intermittent stream on the outlet side. Impacts to the main channel will be approximately 1700 SF below OHW and 1200 SF of banks. Total temporary impacts will be approximately 4,512 SF. C. Carucci requested concurrence from NHDES that the sliplining alternative could be permitted under Env-Wt 904.09 with no mitigation necessary due to the nature of the temporary impacts.

Karl Benedict, NHDES Wetlands Bureau, asked about considerations for change in stream bed elevations at the inlet and outlet to prevent creating a perched condition and if there would be any grade controls used, as well as whether considerations were made for ensuring the pipe would remain backwatered. C. Carucci replied that because of the extreme deterioration of the existing invert, which is essentially missing, the liner sections would be placed at or below the current pipe invert level so there is not anticipated to be any substantial grade change. K. Benedict then asked if the proposed diameter of the pipe after slip lining passes the 100-year storm and C. Carucci responded that it does with a $9/10^{th}$ of a foot increase in the flooding elevation at the inlet. K. Benedict asked for clarification about the proposed water diversion and C. Carucci explained that it would be diverted through the existing pipe using a hose and pump, but that in the event of a large rain storm that all workers and equipment would be removed from the pipe and flow would be allowed to pass as normal. K. Benedict inquired about the impacts associated with access and suggested that a specific restoration plan would be needed to mitigate for impacts to adjacent wetland and the intermittent stream. C. Carucci reiterated that geotextile fabric overlaid with a stone base would be placed on top of the stream to provide a stabilized access path but that both the stone and fabric would be removed after construction and that this method avoids and minimizes the impact to the stream channel and or root mat and soil. The stream nor adjacent wetlands will be permanently disturbed and will be in the same condition and configuration as they exist today once the access materials are removed. This sequencing was sufficient information to meet the restoration concern. Lori Sommer, NHDES Wetlands Bureau, agreed that no mitigation would be required for this project since there are no proposed permanent impacts. Carol Henderson, NHFG, noted that the stream is considered a warm water stream according to the Region 2 biologist, Ben Nugent. There were no further comments.

This project has not been previously discussed at the Monthly Natural Resource Agency Coordination Meeting.

Hinsdale-Brattleboro, #12210D (X-A004(821))

Sarah Large began the meeting and provided Resource Agency partner introductions. Josif Bicja presented an overview of the existing bridges' information, project status, location of the proposed replacement bridge relative to the existing and recommended rehabilitation measures. The Anna Hunt Marsh Bridge (Br. No. 041/040) and Charles Dana Bridge (Br. No. 042/044) were constructed in 1920 and 1927, respectively. Rehabilitation work on both bridges in 1988 included deck and floor system replacement. The bridge decks were replaced again in 2004. Both bridges currently have an overall National Bridge Inspection Standard Condition Rating of 4 (poor). Recommended rehabilitation measures include the following: maintaining the bridge travel way width of 20' +/-, bridge rail replacement, deck repairs, removing the exterior sidewalks, repairing truss members and exterior stringers with advanced sections loss and complete repainting. The existing bearings, deck expansion joints and substructures will also be rehabilitated. He also noted the bridge approaches and island roadway width will be reduced to 16 feet. Natural Resource concerns include:

- Wetlands – Impacts to bank and stream for access to abutments and piers, which may consist of temporary trestles and piles, to perform repairs.
- Shoreland – Permit by Notification is anticipated based on expected clearing work associated with bridge substructure rehabilitation access needs.

- Hazardous Materials/Contamination – There is a potential for lead based paint on the existing bridges. The west abutment of Anna Hunt Marsh Bridge is in close proximity to an area with coal tar contamination in the southwest quadrant of the project. There are also limited reuse soils (LRS) likely to be disturbed due to the roadway work.
- There are no concerns with air, noise, water quality and floodways since these bridges are to be rehabilitated and repurposed into pedestrian/bicycle multi-use structures.
- USFWS IPAC review identified the Federally Listed Northern long-ear bat within the project area.
- NHNHB Data Check performed as part of bridge replacement project identified several State-listed plant species (flat-stem pondweed, grass-leaved mud-plantain, Houghton's umbrella sedge, lesser clearweed, long-leaved pondweed, pygmy-weed and Vasey's pondweed) and vertebrate species (Bald Eagle, Shortnose Sturgeon and Small Footed Bat) in the vicinity of the project. This NHB report is older than 1 year old and a new database check will be initiated during the permitting phase of the project.

Josif concluded the presentation by describing the approximate limits of disturbance and Area of Potential Effect (APE). Sarah Large indicated this presentation served as an initial project review and for coordination with the Resource Agencies. She then asked for Agency attendee questions, comments, and input with a roll call format.

Karl Benedict indicated the project will need a Shoreland Permit, but he is uncertain if it will meet the Permit by Notification requirements at this time. He also asked for clarification on the required in-water work, stream diversion and water quality. Josif Bicja responded that in-water work is not anticipated at this time with all substructure repairs being performed above the river water surface elevation.

Lori Sommer concurred all impacts are temporary, and mitigation is not needed.

Jeffrey Stieb indicated Coast Guard approval is not needed for the bridge repairs. However, the need for lighting temporary structures (trestles, work platforms, etc.) needs to be evaluated.

Carol Henderson asked for the NHB number, which is NHB19-0171. She indicated the NHB data checks will need to be updated since they were performed for the bridge replacement project and passage of time until the rehabilitation project begins. The potential for in-water work and riverbed disturbance needs to be determined since the Connecticut River has occurrences of the Dwarf Wedgemussels (DWM). Carol suggested contacting Susi Van -Ottingen to inquire about DWM's in this reach of the Connecticut River. Mark Hemmerlein indicated there are no occurrences of DWM within the location of the proposed bridge.

Amy Lamb concurred with the need for a new NHB data check and to identify resource impacts with the project area.

Rick Kristoff indicated a check with National Fisheries is required due to the potential for Shortnosed Sturgeon within the project area. An Essential Fish Habitat study is required. The project team also needs to coordinate with Vermont Corps of Engineers office.

Beth Alafat and Pete Steckler had no comments.

Ron Crickard indicted coordination with David Kammer of NHDOT and VTrans regarding the coal tar contamination in the southwest quadrant.

This project has not been previously discussed at the Monthly Natural Resource Agency Coordination Meeting.

New Castle- Rye, #16127

Jennifer Reczek, NHDOT's Project Manager, opened the meeting, beginning with a brief overview of the project's history. She explained that the project was initiated in 2012 and that NHDOT initially identified Replacement with a Bascule Bridge as the Preferred Alternative, but that members of the public expressed concern about the cost of a movable bridge. A new bascule bridge was estimated to cost approximately $10 million more than a fixed bridge, and based on lift logs, the New Castle-Rye Bridge is only opened four to ten times per year. In 2015, NHDOT prepared a Benefit-Cost Analysis comparing the two replacement alternatives and then submitted navigational information to the USCG in order to receive a Preliminary Determination. In March 2016, the USCG notified NHDOT that a fixed bridge was acceptable if the roadway height was increased. NHDOT then modified the design to meet the USCG requirement. Coordination was also undertaken with the New Hampshire Division of Historical Resources (NHDHR) and Consulting Parties regarding the replacement of the historic bridge. In February 2018, an Adverse Effects memo was signed for the project. At that point, the New Castle-Rye Bridge project was paused to allow the Seabrook-Hampton Bridge Project to be advanced so that mitigation for the loss of both bascule bridges could be considered together.

Ms. Reczek then described the two-span fixed alternative, explaining that it is a steel girder bridge with a concrete deck, supported by a single central pier. Ms. Reczek said that the sidewalk would be moved to the east side of the roadway and a small scenic overlook would be installed at mid-span of the bridge. The fixed design would allow for the installation of a new water line along Wentworth Road (NH 1B). Ms. Reczek said that the bridge design would incorporate the 2014 Science and Technology Advisory Panel (STAP) Report guidelines for sea level rise. She then showed a plan detailing the approach impacts. She said that the design team has attempted to minimize the project footprint and that all physical impacts would occur within the right-of-way limits.

Dan Hageman, an Environmental Scientist with FHI, then described the environmental resources in the vicinity of the bridge. He explained that a wetland delineation and Marsh Elder survey were conducted in October 2020. The project team conducted eelgrass surveys in 2013 and 2014, but newer (2019) eelgrass data is now available on NH GRANIT. He explained that Blue Mussel and Softshell Clam beds are located to the west of the bridge, and that NOAA has identified several species of Sea Turtles, the Shortnose Sturgeon, and Atlantic Sturgeon as potentially being present in the waters surrounding the bridge.

Mr. Hageman explained that extensive agency coordination has occurred over the life of the project. The project team last presented at a Natural Resources Agency Coordination Meeting in May 2017. At that time, agencies recommended that a time-of-year (TOY) restriction be implemented and that another eelgrass survey be completed closer to construction. A new DataCheck was submitted to the NH Natural Heritage Bureau (NHNHB) in December 2020 to confirm no new State Listed species are present in the vicinity of the bridge, and an IPaC was also run through the US Fish and Wildlife Service. NHDOT submitted an Essential Fish Habitat (EFH) Assessment to the National Oceanic and Atmospheric Administration (NOAA) in 2018 before the project was paused and in September 2020 NOAA provided conservation recommendations for the project. A Biological Assessment was submitted to NOAA in the spring of 2018 evaluating potential impacts to the Shortnose Sturgeon, Atlantic Sturgeon, and Sea Turtles, and concurrence was received on the Not Likely to Adversely Affect (NLAA) finding. NHDOT is currently coordinating with NOAA to confirm additional information is not required.

Mr. Hageman then summarized the potential impacts the fixed bridge construction would have on environmental resources. He said there would be no direct impacts to tidal vegetated wetlands. There would be temporary and permanent impacts to Estuarine wetland bottom habit but that, overall, there

would be a net increase due to the removal of the existing bridge foundation piles. He said no indirect impacts to wetlands are anticipated due to water quality BMPs during construction. Further, impacts are not anticipated to the federally-listed Red Knot or Roseate Tern, or the Marsh Elder. There could potentially be temporary impacts to the shellfish beds but there would be an opportunity to restore the Estuarine wetland bottom habitat once the existing bridge is removed.

Mr. Hageman then summarized NOAA's conservation recommendations and mitigation measures that are being implemented as part of the project. NOAA's conservation recommendations include the mapping of eelgrass beds and the maintenance of a 25-foot buffer from the beds during construction, turbidity monitoring, and the avoidance of shellfish beds to the extent possible. Mr. Hageman said that if impacts to shellfish beds could not be avoided, compensatory mitigation would be identified through the Section 404 permitting process. Mitigation measures include the restriction of in-water work to between November 15 and March 15, the containment of turbid water during pier installation, the avoidance of eelgrass beds, and the avoidance of tidal wetlands. In addition, stormwater would be managed during construction and permanent water quality measures would be implemented in accordance with MS4.

Ms. Reczek explained the status of coordination with the USCG and US Army Corps of Engineers (USACE) regarding navigation. She said that USACE provided preliminary comments on the proposed clearances in 2014. Between 2015 and 2016, NHDOT and FHWA coordinated with the USCG. A meeting was held with USACE in 2017 to discuss Section 408 approval for the project, and a new Navigation Impact Report will be submitted to the USCG in January of 2021.

Ms. Reczek concluded the presentation by outlining next steps. She said coordination would continue with the USCG, USACE and NHDHR, and that an Environmental Assessment will be released for public review next year, pending the ongoing USCG coordination. In addition, state and federal permits would be prepared and submitted to USACE, the USCG, and NH Department of Environmental Services (NHDES).

Karl Benedict with NHDES said the project team will need to coordinate with his office on water quality and turbidity monitoring.

Chris Williams with NHDES asked if the design incorporates sea level rise projections. Ms. Reczek said, yes, that it provides 4.3 feet of additional clearance beyond the existing condition. Mr. Williams then asked if an Individual 401 permit would be prepared. Sarah Large with NHDOT said the project team would check.

Mike Walsh with USACE asked about channel depths and said that the project team will need to submit cross sections for review. Ms. Reczek said the proposed channel width for the fixed bridge is 51.5 feet with 17.3 feet of air draft above MHW.

Jeff Stieb with the USCG said the Navigation Impact Report is very important. He explained that conditions have changed since 2017, that now there is opposition from the Port and a marina changed hands southwest of the bridge. He suggested that the project team meet with Donna Fischer at the USCG. He also suggested that NHDOT submit the report for draft review in advance of the formal submission.

Mark Hemmerlein with NHDOT said they need clarification on whether they will need the 401 permit in order to submit the USCG Bridge Permit.

Lori Summer with NHDES asked that she be included in future mitigation discussions.

Carol Henderson with NHDES suggested that the project team coordinate with Fred Short at the University of New Hampshire regarding eelgrass in the vicinity of the bridge. Stephanie Dyer-Carroll with FHI said that the team had coordinated with him in the past. Mike Johnson with NOAA shared that Fred Short had retired and suggested that the project team contact someone at NH GRANIT. Ms. Henderson also suggested that the project team coordinate with Chris Martin from Audubon closer to construction regarding the Bald Eagle.

Amy Lamb with NHNHB asked that we provide her with the numbers from the project's earlier data requests.

Jeanie Brochi with EPA asked if there had been additional survey of the water flow for increased recreational use impacts to the channel and due to sea level rise. She also asked when the new eelgrass survey would be completed and who would do it. Dan Hageman said that the eelgrass survey would be completed about a year before construction and that the surveyor had not yet been identified.

Ms. Reczek thanked attendees and said that the project team will need to come back to further discuss mitigation and if the bridge type changes in the future.

This project was previously discussed at the 3/20/13, 1/15/14, and 5/17/17 Monthly Natural Resource Agency Coordination Meetings.

Seabrook-Hampton, #15904 (X-A001(026))

The third Natural Resources Agency Coordination Meeting for the Hampton Harbor Bridge Project was held on December 16, 2020. Jennifer Reczek, NHDOT's Project Manager opened the meeting. She explained that the project was initiated in 2018 and that they initially considered three alternatives – Replacement with a Fixed Bridge, Replacement with a Bascule Bridge, and Rehabilitation (with a Widened Bridge). A fourth alternative was added, a Twin Bascule Bridge (with Rehabilitated Bridge), to address cultural resources concerns. In the spring of 2020, NHDOT completed a Type, Size and Location Study which identified the Replacement with Fixed Bridge as the Preferred Alternative. Ms. Reczek said that the Preferred Alternative would provide sufficient vertical clearance for vessels, including the US Army Corps of Engineers' (USACE) dredge vessel, the *Currituck*. It would widen the navigational opening under the bridge to 150 feet, but it would not impact the Hampton Harbor Navigational Channel to the west.

Dan Hageman, a member of the HDR consultant team, explained that the Red Knot, Piping Plover, and Roseate Tern were all identified as potentially occurring within the study area. He said the project team met with the US Fish and Wildlife Service (USFWS) and NH Fish and Game (NHFG) last year to discuss the project. USFWS recommended a 200-meter setback from plover habitat to project related work between April and August when the birds could be on site in order to avoid adverse effects, but that the project team determined that this was not feasible because it could extend the construction period up to seven years. NHDOT initiated formal consultation with USFWS in December 2020 with the submission of a Biological Assessment (BA).

Mr. Hageman explained that the project team had also coordinated with the NH Natural Heritage Bureau (NHNHB) about State-listed plant species present on the site. He said they undertook a survey of the project area in 2018, but that some of the plants were moved in 2019 in advance of the USACE project. The project team also prepared and submitted a Programmatic BA to the National Oceanic and Atmospheric Administration (NOAA) to assess potential impacts to Shortnose Sturgeon, Atlantic Sturgeon, and several species of sea turtles. Mr. Hageman said an Essential Fish Habitat (EFH) Assessment had also been submitted to NOAA.

Stephanie Dyer-Carroll, another member of the HDR consultant team, explained that coordination had also been ongoing regarding effects to cultural resources and Section 6(f) properties. She said the project team met with the NH Division of Historical Resources (NHDHR) and Consulting Parties in October 2020 to discuss potential mitigation measures for the Seabrook-Hampton and New Castle-Rye Bridge projects, and that they are working with NH State Parks to determine if a 6(f) conversion will be required at the Hampton State Pier. Mr. Hageman said NHDOT has received a Preliminary Determination from the US Coast Guard (USCG) concurring with the proposed navigational clearances.

Mr. Hageman then summarized the potential impacts of the project. He said the USFWS BA concluded the project would be Unlikely to Affect the Roseate Tern; it May Affect but is Unlikely to Adversely Affect the Red Knot, and that it May Affect and is Likely to Adversely Affect the Piping Plover due to construction activity and habitat loss. The Programmatic BA submitted to NOAA concluded the project is Not Likely to Adverse Effect the listed aquatic species, while the EFH Assessment found that, while there would be adverse effects, they would not be substantial. He said there would be both temporary and permanent impacts to channel bottom habitat and shellfish beds, but that there will be opportunities for the restoration of habitat once the existing bridge is removed.

Mr. Hageman summarized conservation and mitigation measures to address potential impacts. He said a number of conservation measures were identified in the USFWS BA, including the use of protective fencing, strict housekeeping, and slow starts when pile driving during Piping Plover breeding season. Mitigation to address impacts to aquatic species include restricting in-water work to between November 15th and March 15th, and the use of cofferdams to contain the work activity at the piers. He said NHDOT may use the NH In-Lieu-Fee program in conjunction with the USACE mitigation needs during the permitting phase. He said NHDOT also plans to survey and relocate the listed plant species where necessary prior to construction.

Ms. Reczek concluded the presentation by discussing next steps. She said they will be developing a Memorandum of Agreement with NHDHR and Consulting Parties and moving forward with formal consultation with USFWS under Section 7. They will also be coordinating with NOAA regarding the EFH Assessment and Programmatic BA. NHDOT plans to release the EA and 4(f) Evaluation to the public in March of 2021 and hold a public meeting. Once compliance is complete under the National Environmental Policy Act (NEPA), NHDOT will move forward with the preparation of permits for the project.

Eben Lewis with the NH Department of Environmental Services (NHDES) said the project team will need to quantify the impacts to the sand dunes and prepare a Vulnerability Assessment and Coastal Worksheet. Ms. Reczek asked if the quantification of the dune impacts is required for permitting and Mr. Lewis confirm that it was.

Chris Williams with NHDES asked if the project incorporates sea level rise, including in the design of the path under the north side of the bridge. John Stockton, a member of the HDR consultant team, said the path would be above the water. Mr. Williams said the project team should coordinate with the NHDES Coastal Program Habitat Coordinator on mitigation. He also suggested that Ms. Reczek give a presentation about the project at a future Dredge Management Task Force meeting.

Lori Sommer with NHDES suggested the project team organize a separate meeting to discuss mitigation with Kevin Lucey and Kirsten Howard. This could include salt marsh ditch remediation and the use of signage to restrict access. Chris Williams said they should also include Alyson Eberhardt because she'd been working in the dunes southwest of the bridge. Alyson said she'd happy to share what's been done.

Mike Walsh with USACE said he likes the improvements to the navigational opening and that they will be looking for cross sections for their review as part of the Section 408 review. Rick Kristoff, also with USACE, said the project may require an Individual Section 401 permit.

Susi von Oettingen with USFWS said she'd just begun her review of the BA. She said any deposition of dredge spoil on the beach should be done in the winter to minimize adverse impacts. She also said that if the project can't start in March or earlier, when the Piping Plovers aren't on site, they should identify measures to discourage nesting so as to avoid the loss of a nest.

Mike Johnson with NOAA said he wanted to know what the buffer was between the underside of the bridge and vessels. Ms. Reczek said USACE currently has to use a private contractor to dredge the harbor, as the *Currituck* requires 44 feet of clearance at Mean High Water (MHW). Additionally, it is taller than all any other vessel that has transited the current bridge. An additional four feet of clearance (48' total from MHW) has been provided based upon the guidance in the 2014 STAP report. Mr. Johnson believes that it is worth re-evaluating if four feet is adequate for the life of the bridge project. He also said that removal of the pier won't necessarily result in the restoration of shellfish habitat, as the piers are in deeper water.

Carol Henderson with NHFG suggested Brendan Clifford be included in mitigation discussions related to the Piping Plover.

Amy Lamb with NHNHB asked that the project team continue to coordinate on the development of transplant protocols for the listed plants.

Jeanie Brochi with the Environmental Protection Agency (EPA) asked if an eelgrass survey had been undertaken. Ms. Dyer-Carroll said they'd coordinated with Fred Short at the University of New Hampshire at the outset of the project and he said eelgrass had never been identified in the project area and was not anticipated due to the velocity of the water. Ms. Brochi said they should reach out to the Wetland Bureau Chief, Jackie LeClaire, to coordinate on the Section 401 permit. Mark Hemmerlein with NHDOT said the 401 permit applies to the activity and not the discharge, and that a meeting should occur between NHDOT, USCG and USACE to discuss the requirements.

This project was previously discussed at the 8/15/18, 1/16/19, and 12/18/19 Monthly Natural Resource Agency Coordination Meetings.

Newport, #20006 (LPA)

The proposed project is a NHDOT Municipal Bridge Aid Project which involves replacing an existing 20' clear span bridge which carries Sand Hill Road over Long Pond Brook with a new 32' clear span bridge. The roadway is currently restricted to one lane of traffic due to the deteriorated condition of the superstructure. Kleinfelder, Inc. is the lead engineer and Headwaters Consulting, LLC is the hydraulics and environmental subconsultant. Sean Sweeney presented the project via PowerPoint slides.

The watershed area of Long Pond Brook at Sand Hill Road is 11.4 square miles and the crossing is located within a FEMA Zone A Special Flood Hazard Area (SFHA). Therefore, the crossing is classified as a tier 3 stream crossing under Env-Wt 904.05(a)(1) and (3).

Hydraulic analyses of Long Pond Brook under existing and proposed conditions indicate that the new bridge would pass the 50-year flood with more than one foot of freeboard, thereby meeting NHDOT hydraulic design criteria. In addition, the analyses show that 100-year flood levels upstream from the crossing will decrease by as much as ten inches and will not change downstream from the crossing, thereby

meeting minimum local and federal floodplain management standards and rendering a FEMA Conditional Letter of Map Revision unnecessary.

Results of the stream geomorphic assessment were presented. The reference stream type is C4 with a bankfull width of approximately 21'. The average channel slope is about 0.32%. On the upstream side of the crossing an active floodplain borders the west channel bank and a high terrace borders the east bank. On the downstream side of the crossing a narrow active floodplain borders the east bank and a manmade boulder wall forms the west bank. The historic floodplain on the west side of the brook below the crossing has been filled.

The minimum bridge clear span which would comply with the NH Stream Crossing Guidelines is 46' as this is the minimum span needed to accommodate the minimum entrenchment ratio of 2.2 for C-type streams with a bankfull width of 21'. Mr. Sweeney explained that a span of this size is not practicable at the site as it is wider than the combined width of the channel and relict floodplain immediately downstream from the crossing.

Preliminary estimates of wetland and stream channel impacts were presented as follows:

- Perennial stream bed: 130 sf / 65 lf
- Perennial stream bank: 500 sf / 130 lf
- Wetland: 20 sf

The anticipated wetland impacts would be on a narrow, low floodplain adjacent to the stream bank near the northwest bridge corner and would result from construction of the new bridge abutment and wing walls. Although vegetation in the wetland has been altered by mowing, it meets the definition of a floodplain wetland under Env-Wt 103.10 and is contiguous to a tier 3 watercourse; therefore, it meets the definition of a priority resource area (PRA) under Env-Wt 103.65.

NHB has no records of rare species or exemplary natural communities in the project vicinity (reference NHB20-3461).

Permitting

The project will require a DES Wetlands Permit and is expected to be authorized by the U.S. Army Corps of Engineers under the NH State Programmatic General Permit (NHSPGP).

Long Pond Brook is not subject to the Shoreland Water Quality Protection Act (RSA 483-B); therefore, a DES Shoreland Permit will not be needed.

Pertinent sections of the DES Wetlands Administrative Rules were presented as follows:

- Env-Wt 904.09: The project is not eligible for these less stringent design standards because in addition to watershed size, the crossing is classified as tier 3 because it is located in a FEMA SFHA.

- Env-904.07: This section of the Rules includes the crossing design standards which are applicable to the project, including a requirement to comply with the design requirements under the NH Stream Crossing Guidelines.

- Env-Wt 904.10: This section of the Rules includes requirements for permitting the project as an alternative design if it does not meet the design standards under 904.07. The permit application will likely request approval as an alternative design under this section as the proposed 32' span is less than the minimum 46' span required under the Stream Crossing Guidelines.

- Env-Wt 904.05: Since the proposed stream crossing does not meet all of the requirements of Env-Wt 904.07 and is not eligible for approval under 904.09, it will not qualify for either of the compensatory mitigation exemptions under 904.05(f).

- Env-Wt 313.04: This section of the rules requires that compensatory mitigation be provided for impacts to PRA wetlands under 313.04(a)(1).

Comments

Sarah Large commented that she would like to discuss the impacts to the PRA wetland and mitigation requirements because the design appears to offset the impacts and restore/recreate more floodplain wetlands than would be disturbed and that she thought the improvements would qualify as self-mitigating.

Karl Benedict had the following comments:

- he appreciated thoroughness of presentation;
- the proposed design meets 902.27 for stream crossing improvements (i.e. self-mitigating);
- the proposed design will improve functions; and
- the proposed bridge size is appropriate.

Karl deferred the question as to whether mitigation is required under 313.04(a)(1) to Lori Sommer.

Lori had questions about what was driving the wetland and stream channel impacts. (Sean described the need for the proposed impacts as being due to the excavation required for construction of the new bridge footings, abutments, wingwalls, floodplain bench/wildlife shelf, and scour protection.)

Lori asked whether impact areas would be restored (Sean described that impacts to the channel bed and banks outside of the bridge opening would likely be restored using native streambed materials and bio-engineered bank stabilization techniques).

Lori commented that DES is still figuring out their new rules and discussions have been had on possible changes so that the rules are applied consistently and have the desired effect/intent. She indicated that at present there is no clear guidance on mitigation ratios for PRA impacts, but that the proposed floodplain bench/wildlife shelf could likely be considered compensation for the proposed PRA impacts if the floodplain bench is to be a created wetland. Monitoring would be required to demonstrate stabilization and revegetation.

Lori concurred with Karl that a 32' clear span appears appropriately sized and that the stream-rules-compliant span of 46' is unnecessary. She would like to see as much bioengineering in the project design as possible.

Lori stated that DES would have further internal discussions concerning the need for mitigation or any waivers to the Wetlands Administrative Rules and follow up with the design team at a later date.

(Note that during a subsequent phone conversation between Karl and Sean on December 23, 2020, Karl indicated that a formal compensatory mitigation proposal would be needed for impacts to the PRA wetland and that wetland creation via construction of the floodplain bench on the east side of the brook would likely be an acceptable mitigation proposal.)

Matt Urban questioned whether the floodplain wetland to be impacted near the northwest corner of the bridge was truly a wetland and therefore a PRA. (Sean described the previously completed wetland delineation work and that although vegetation in the area has been altered; it is still a jurisdictional wetland under Section F of the Corps Wetlands Delineation Manual).

Carol commented that it was a good presentation and appreciated incorporation of a floodplain bench/wildlife shelf into the project design. Carol also stated that NHFG has not completed any fish surveys for Long Pond Brook.

Amy commented that the presentation was great and that the project design is very interesting. Amy confirmed that there are no NHB records in the project vicinity and that NHB has no additional comments.

Jean Brochi

Jean stated that it was a great presentation but had no additional comments.

Rick Kristoff

Rick suggested that the permit application include a discussion no net loss of floodplain.

This project has not been previously discussed at the Monthly Natural Resource Agency Coordination Meeting.